ELSEVIER

Journal of Nuclear Materials 223 (1995) 327–329

journal of nuclear materials

Author index

Abromeit, C., see Turkin, A.A. 223 (1995) 143
Akabori, M., see Ogawa, T. 223 (1995) 67
Allen, G.C. and N.R. Holmes, A mechanism for the UO_2 to α-U_3O_8 phase transformation 223 (1995) 231
Amaya, M., see Tsuji, T. 223 (1995) 33
Amaya, M., see Une, K. 223 (1995) 40
Ananthasivan, K., see Anthonysamy, S. 223 (1995) 20
Anthonysamy, S., K. Ananthasivan, I. Kaliappan, V. Chandramouli, P.R. Vasudeva Rao, C.K. Mathews and K.T. Jacob, Chemical potential of carbon in the system U–Pu–C–O–N: Measurements and calculation 223 (1995) 20
Antony, M.P., R. Babu, C.K. Mathews and U.V. Varada Raju, Enthalpies of formation of UNi_5, UNi_2 and UFe_2 by solution calorimetry 223 (1995) 213
Arai, S., see Nakae, T. 223 (1995) 210
Audero, M.A., A.M. Bevilacqua, N.B.M. de Bernasconi, D.O. Russo and M.E. Sterba, Immobilization of simulated high-level waste in sintered glasses 223 (1995) 151

Babu, R., see Antony, M.P. 223 (1995) 213
Bacon, D.J., see Phythian, W.J. 223 (1995) 245
Bakai, A.S., see Turkin, A.A. 223 (1995) 143
Bakker, K., H. Kwast and E.H.P. Cordfunke, The contribution of thermal radiation to the thermal conductivity of porous UO_2 223 (1995) 135
Bevilacqua, A.M., see Audero, M.A. 223 (1995) 151
Boilot, J.-P., see Renoult, O. 223 (1995) 126
Boncoeur, M., see Renoult, O. 223 (1995) 126

Calder, A.F., see Phythian, W.J. 223 (1995) 245
Chandramouli, V., see Anthonysamy, S. 223 (1995) 20
Chizhov, A.A., see Renard, Ed.V. 223 (1995) 90
Chkuaseli, V.F. and Hj. Matzke, Volatile fission product bubble behaviour in uranium dioxide 223 (1995) 61
Cordfunke, E.H.P., see de Boer, R. 223 (1995) 103
Cordfunke, E.H.P., see Bakker, K. 223 (1995) 135
Cost, J.R. and K.A. Johnson, Nucleation of the $\alpha \rightarrow \beta$ and $\beta \rightarrow \alpha$ transformations in unalloyed plutonium 223 (1995) 267
Cox, B., Y.-M. Wong and T. Hoang, Electrically conducting paths in thick (> 10 μm) zirconia films 223 (1995) 202
Cox, B., Y.-M. Wong and C.W.F. Quon, Cathodic polarisation of corroding Zircaloy-4 223 (1995) 321

Davis, J.W. and A.A. Haasz, Reemission of deuterium atoms from Mo, Ta and W during D^+-irradiation 223 (1995) 312
De Bernasconi, N.B.M., see Audero, M.A. 223 (1995) 151
De Boer, R. and E.H.P. Cordfunke, Reaction of tellurium with Zircaloy-4 223 (1995) 103

Edwards, D.J., see Singh, B.N. 223 (1995) 95
Evans, J.H., see Singh, B.N. 223 (1995) 95

Foreman, A.J.E., see Phythian, W.J. 223 (1995) 245
Fujii, K., see Nakae, T. 223 (1995) 210
Fujino, T., N. Sato and K. Yamada, A refined analysis of oxygen potential of $M_yU_{1-y}O_{2+x}$ ($M = M^{3+}$ and M^{2+}) by lattice statistics based on the grand partition function and the Flory methods 223 (1995) 6

Garg, S.P., see Patil, R.V. 223 (1995) 169
Gauld, I., see Tait, J.C. 223 (1995) 109
Gensini, M.M., see Ogawa, T. 223 (1995) 67
Gibson, J.K., see Ogawa, T. 223 (1995) 67
Glatz, J.-P., E.H. Toscano, G. Pagliosa and A. Nicholl, Influence of granite on the leaching behaviour of different nuclear waste forms 223 (1995) 84
Gnanasekaran, T., see Sridharan, R. 223 (1995) 72
Gupta, D., see Hood, G.M. 223 (1995) 122

Haasz, A.A., see Davis, J.W. 223 (1995) 312
Haire, R.G., see Ogawa, T. 223 (1995) 67
Hayashi, T., see Konishi, S. 223 (1995) 300
Hoang, T., see Cox, B. 223 (1995) 202
Hofman, G.L., see Rest, J. 223 (1995) 192
Hoinkis, E., Desorption of ^{137}Cs from a graphitic surface in the presence of a weak electric field 223 (1995) 189
Hoinkis, E. and H. Matiske, A mass spectrometric study of the thermal decomposition of small quantities of $AgNO_3$, $CsNO_3$ and Cs_2CO_3 223 (1995) 218
Holmes, N.R., see Allen, G.C. 223 (1995) 231
Hood, G.M., H. Zou, D. Gupta and R.J. Schultz, α-Zr self-diffusion anisotropy 223 (1995) 122

Hood, G.M., see Zou, H. 223 (1995) 186
Horino, H., see Nakae, T. 223 (1995) 210
Horsewell, A., see Singh, B.N. 223 (1995) 95

Imamura, M., see Une, K. 223 (1995) 40

Jacob, K.T., see Anthonysamy, S. 223 (1995) 20
Johnson, K.A., see Cost, J.R. 223 (1995) 267

Kale, G.B., see Patil, R.V. 223 (1995) 169
Kaliappan, I., see Anthonysamy, S. 223 (1995) 20
Kawatsura, K., see Nakae, T. 223 (1995) 210
Kennard, D.R., see Pulham, R.J. 223 (1995) 277
Kerr, A.H., see Tait, J.C. 223 (1995) 109
Kim, Y.S., J.S. Noh, S.C. Kwon and I.H. Kuk, Effect of hoop stress on corrosion of Zircaloy-4 cladding tube 223 (1995) 163
Konishi, S., T. Nagasaki and K. Okuno, Reversible disproportionation of ZrCo under high temperature and hydrogen pressure 223 (1995) 294
Konishi, S., T. Nagasaki, T. Hayashi and K. Okuno, Equilibrium hydrogen pressure on the solid solutions of ZrCo–HfCo intermetallic compounds 223 (1995) 300
Korb, J.-P., see Renoult, O. 223 (1995) 126
Korei, Y., see Une, K. 223 (1995) 40
Koterazawa, K., see Nakae, T. 223 (1995) 210
Kuk, I.H., see Kim, Y.S. 223 (1995) 163
Kwast, H., see Bakker, K. 223 (1995) 135
Kwon, S.C., see Kim, Y.S. 223 (1995) 163

Li, B., see Zhang, C.-S. 223 (1995) 238
Lucuta, P.G., Hj. Matzke and R.A. Verrall, Thermal conductivity of hyperstoichiometric SIMFUEL 223 (1995) 51

Mahendran, K.H., see Sridharan, R. 223 (1995) 72
Masuzaki, S., N. Ohno and S. Takamura, Experimental study on plasma heat flow to plasma-facing materials 223 (1995) 286
Mathews, C.K., see Anthonysamy, S. 223 (1995) 20
Mathews, C.K., see Sridharan, R. 223 (1995) 72
Mathews, C.K., see Antony, M.P. 223 (1995) 213
Matiske, H., see Hoinkis, E. 223 (1995) 218
Matzke, Hj., Oxygen potential measurements in high burnup LWR UO_2 fuel 223 (1995) 1
Matzke, Hj., see Lucuta, P.G. 223 (1995) 51
Matzke, Hj., see Chkuaseli, V.F. 223 (1995) 61
McEnaney, B., see Neighbour, G.B. 223 (1995) 305
Mitamura, T., see Nakae, T. 223 (1995) 210
Mokuno, Y., see Nakae, T. 223 (1995) 210
Morita, K., see Muto, Y. 223 (1995) 262
Muto, Y. and K. Morita, Fraction of hydrocarbon emission in thermal re-emission of hydrogen implanted into graphite 223 (1995) 262

Nagasaki, T., see Konishi, S. 223 (1995) 294
Nagasaki, T., see Konishi, S. 223 (1995) 300
Nakae, T., K. Kawatsura, R. Takahashi, S. Arai, T. Mitamura, M. Terasawa, H. Uchida, K. Koterazawa, H. Horino, Y. Mokuno and K. Fujii, Characterization of single crystal of Type 304 stainless steels using RBS- and PIXE-channeling 223 (1995) 210
Nakajima, H., see Zou, H. 223 (1995) 186
Naundorf, V., see Turkin, A.A. 223 (1995) 143
Neighbour, G.B. and B. McEnaney, An investigation of acoustic emission from an irradiated nuclear graphite 223 (1995) 305
Nicholl, A., see Glatz, J.-P. 223 (1995) 84
Noh, J.S., see Kim, Y.S. 223 (1995) 163
Norton, P.R., see Zhang, C.-S. 223 (1995) 238

Ogawa, T., J.K. Gibson, R.G. Haire, M.M. Gensini and M. Akabori, Thermodynamic analysis of Zr–U and Zr–Np alloys in view of f–d interaction 223 (1995) 67
Ohno, N., see Masuzaki, S. 223 (1995) 286
Okuno, K., see Konishi, S. 223 (1995) 294
Okuno, K., see Konishi, S. 223 (1995) 300
Olander, D.R. and W. Wang, Heat effects accompanying phase changes in the Zr–U–O system 223 (1995) 28
Owen, D.G., see Taylor, P. 223 (1995) 316

Pagliosa, G., see Glatz, J.-P. 223 (1995) 84
Patil, R.V., G.B. Kale and S.P. Garg, Chemical diffusion in Zr–Nb system 223 (1995) 169
Pells, G.P. and B.C. Sowden, The electrical conductivity of sapphire irradiated at 550–700°C with an applied electric field of 1 kV/cm 223 (1995) 174
Periaswami, G., see Sridharan, R. 223 (1995) 72
Perujo, A., see Serra, E. 223 (1995) 157
Phythian, W.J., R.E. Stoller, A.J.E. Foreman, A.F. Calder and D.J. Bacon, A comparison of displacement cascades in copper and iron by molecular dynamics and its application to microstructural evolution 223 (1995) 245
Pulham, R.J. and M.W. Richards, Chemical reactions of caesium, tellurium and oxygen with fast breeder reactor cladding alloys. Part VII – The kinetics of the corrosion of 12R72HV steel by Cs_2Te at a constant O_2 potential; comparison with rates for PE16 alloy 223 (1995) 180
Pulham, R.J., M.W. Richards and D.R. Kennard, Chemical reactions of Zircaloy-4 and zirconium with (i) dicaesium telluride, Cs_2Te, (ii) caesium tellurite, Cs_2TeO_3, and (iii) tellurium, under different oxygen potentials 223 (1995) 277

Quon, C.W.F., see Cox, B. 223 (1995) 321

Renard, Ed.V., A.A. Chizhov and V.S. Vlasov, The Purex thermodynamics of plutonium(IV) and uranium(VI) macroconcentrations coextraction into tri-n butylphosphate: new data and new models 223 (1995) 90

Renoult, O., J.-P. Boilot, J.-P. Korb and M. Boncoeur, Lithium sol–gel ceramics for tritium breeding applications 223 (1995) 126
Rest, J. and G.L. Hofman, Effect of recrystallization in high-burnup UO_2 on gas release during RIA-type transients 223 (1995) 192
Richards, M.W., see Pulham, R.J. 223 (1995) 180
Richards, M.W., see Pulham, R.J. 223 (1995) 277
Roy, J.A., see Zou, H. 223 (1995) 186
Russo, D.O., see Audero, M.A. 223 (1995) 151

Sato, N., see Fujino, T. 223 (1995) 6
Schultz, R.J., see Hood, G.M. 223 (1995) 122
Schultz, R.J., see Zou, H. 223 (1995) 186
Serra, E. and A. Perujo, The surface rate constants of deuterium in the martensitic steel DIN 1.4914 (MANET) 223 (1995) 157
Singh, B.N., J.H. Evans, A. Horsewell, P. Toft and D.J. Edwards, Microstructure and mechanical behaviour of TZM and Mo–5% Re alloys irradiated with fission neutrons 223 (1995) 95
Sowden, B.C., see Pells, G.P. 223 (1995) 174
Sridharan, R., K.H. Mahendran, T. Gnanasekaran, G. Periaswami, U.V. Varadaraju and C.K. Mathews, On the phase relationships and electrical properties in the $CaCl_2$–CaH_2 system 223 (1995) 72
Sterba, M.E., see Audero, M.A. 223 (1995) 151
Stoller, R.E., see Phythian, W.J. 223 (1995) 245
Suzuki, A., see Yamawaki, M. 223 (1995) 80

Tait, J.C., I. Gauld and A.H. Kerr, Validation of the ORIGEN-S code for predicting radionuclide inventories in used CANDU fuel 223 (1995) 109
Takahashi, R., see Nakae, T. 223 (1995) 210
Takamura, S., see Masuzaki, S. 223 (1995) 286
Taylor, P., D.D. Wood and D.G. Owen, Microstructures of corrosion films on UO_2 fuel oxidized in air–steam mixtures at 225°C 223 (1995) 316
Terasawa, M., see Nakae, T. 223 (1995) 210
Toft, P., see Singh, B.N. 223 (1995) 95
Toscano, E.H., see Glatz, J.-P. 223 (1995) 84
Trinkaus, H., Local stress relaxation in thermal spikes as a possible cause for creep and macroscopic stress relaxation of amorphous solids under irradiation 223 (1995) 196
Tsuji, T. and M. Amaya, Study on order–disorder transition of Zr–O alloys (O/Zr = 0–0.31) by heat capacity measurement 223 (1995) 33
Turkin, A.A., Yu.A. Turkin, A.S. Bakai, C. Abromeit, V. Naundorf and N. Wanderka, Modelling of cascade-induced dissolution of coherent chromium precipitates in copper 223 (1995) 143
Turkin, Yu.A., see Turkin, A.A. 223 (1995) 143

Uchida, H., see Nakae, T. 223 (1995) 210
Une, K., M. Imamura, M. Amaya and Y. Korei, Fuel oxidation and irradiation behaviors of defective BWR fuel rods 223 (1995) 40

Varadaraju, U.V., see Sridharan, R. 223 (1995) 72
Varada Raju, U.V., see Antony, M.P. 223 (1995) 213
Vasudeva Rao, P.R., see Anthonysamy, S. 223 (1995) 20
Verrall, R.A., see Lucuta, P.G. 223 (1995) 51
Vlasov, V.S., see Renard, Ed.V. 223 (1995) 90

Wanderka, N., see Turkin, A.A. 223 (1995) 143
Wang, W., see Olander, D.R. 223 (1995) 28
Wong, Y.-M., see Cox, B. 223 (1995) 202
Wong, Y.-M., see Cox, B. 223 (1995) 321
Wood, D.D., see Taylor, P. 223 (1995) 316

Yamada, K., see Fujino, T. 223 (1995) 6
Yamaguchi, K., see Yamawaki, M. 223 (1995) 80
Yamawaki, M., A. Suzuki, M. Yasumoto and K. Yamaguchi, Effect of sweep gas chemistry on vaporization of Li_4SiO_4 223 (1995) 80
Yasumoto, M., see Yamawaki, M. 223 (1995) 80

Zhang, C.-S., B. Li and P.R. Norton, The segregation of Fe to a zirconium surface 223 (1995) 238
Zou, H., G.M. Hood, H. Nakajima, J.A. Roy and R.J. Schultz, The solid solubility of Ni and Co in α-Zr: a secondary ion mass spectrometry study 223 (1995) 186
Zou, H., see Hood, G.M. 223 (1995) 122

ELSEVIER

Journal of Nuclear Materials 223 (1995) 331–337

journal of nuclear materials

Subject index

Absorber Materials
Validation of the ORIGEN-S code for predicting radionuclide inventories in used CANDU fuel, J.C. Tait, I. Gauld and A.H. Kerr 223 (1995) 109

Adsorption
Desorption of ^{137}Cs from a graphitic surface in the presence of a weak electric field, E. Hoinkis 223 (1995) 189

Amorphization and Amorphous Materials
Influence of granite on the leaching behaviour of different nuclear waste forms, J.-P. Glatz, E.H. Toscano, G. Pagliosa and A. Nicholl 223 (1995) 84
Local stress relaxation in thermal spikes as a possible cause for creep and macroscopic stress relaxation of amorphous solids under irradiation, H. Trinkaus 223 (1995) 196

Analytical Instruments and Methods
α-Zr self-diffusion anisotropy, G.M. Hood, H. Zou, D. Gupta and R.J. Schultz 223 (1995) 122
The solid solubility of Ni and Co in α-Zr: a secondary ion mass spectrometry study, H. Zou, G.M. Hood, H. Nakajima, J.A. Roy and R.J. Schultz 223 (1995) 186
Electrically conducting paths in thick (> 10 μm) zirconia films, B. Cox, Y.-M. Wong and T. Hoang 223 (1995) 202
Nucleation of the α → β and β → α transformations in unalloyed plutonium, J.R. Cost and K.A. Johnson 223 (1995) 267

Breeding Materials
Effect of sweep gas chemistry on vaporization of Li_4SiO_4, M. Yamawaki, A. Suzuki, M. Yasumoto and K. Yamaguchi 223 (1995) 80
Chemical reactions of caesium, tellurium and oxygen with fast breeder reactor cladding alloys. Part VII – The kinetics of the corrosion of 12R72HV steel by Cs_2Te at a constant O_2 potential; comparison with rates for PE16 alloy, R.J. Pulham and M.W. Richards 223 (1995) 180

Carbon
Desorption of ^{137}Cs from a graphitic surface in the presence of a weak electric field, E. Hoinkis 223 (1995) 189
Fraction of hydrocarbon emission in thermal re-emission of hydrogen implanted into graphite, Y. Muto and K. Morita 223 (1995) 262
Experimental study on plasma heat flow to plasma-facing materials, S. Masuzaki, N. Ohno and S. Takamura 223 (1995) 286
An investigation of acoustic emission from an irradiated nuclear graphite, G.B. Neighbour and B. McEnaney 223 (1995) 305
Reemission of deuterium atoms from Mo, Ta and W during D^+-irradiation, J.W. Davis and A.A. Haasz 223 (1995) 312

Ceramics *(not listed elsewhere)*
On the phase relationships and electrical properties in the $CaCl_2$–CaH_2 system, R. Sridharan, K.H. Mahendran, T. Gnanasekaran, G. Periaswami, U.V. Varadaraju and C.K. Mathews 223 (1995) 72
Lithium sol–gel ceramics for tritium breeding applications, O. Renoult, J.-P. Boilot, J.-P. Korb and M. Boncoeur 223 (1995) 126

Chemical Reactions *(includes Electrochemical and Thermochemical Reactions)*
Chemical potential of carbon in the system U–Pu–C–O–N: Measurements and calculation, S. Anthonysamy, K. Ananthasivan, I. Kaliappan, V. Chandramouli, P.R. Vasudeva Rao, C.K. Mathews and K.T. Jacob 223 (1995) 20
Heat effects accompanying phase changes in the Zr–U–O system, D.R. Olander and W. Wang 223 (1995) 28
Fuel oxidation and irradiation behaviors of defective BWR fuel rods, K. Une, M. Imamura, M. Amaya and Y. Korei 223 (1995) 40
On the phase relationships and electrical properties in the $CaCl_2$–CaH_2 system, R. Sridharan, K.H. Mahendran, T. Gnanasekaran, G. Periaswami, U.V. Varadaraju and C.K. Mathews 223 (1995) 72
Reaction of tellurium with Zircaloy-4, R. de Boer and E.H.P. Cordfunke 223 (1995) 103

Chemical reactions of Zircaloy-4 and zirconium with (i) dicaesium telluride, Cs_2Te, (ii) caesium tellurite, Cs_2TeO_3, and (iii) tellurium, under different oxygen potentials, R.J. Pulham, M.W. Richards and D.R. Kennard 223 (1995) 277

Cladding Materials

Oxygen potential measurements in high burnup LWR UO_2 fuel, Hj. Matzke 223 (1995) 1

Chemical reactions of caesium, tellurium and oxygen with fast breeder reactor cladding alloys. Part VII – The kinetics of the corrosion of 12R72HV steel by Cs_2Te at a constant O_2 potential; comparison with rates for PE16 alloy, R.J. Pulham and M.W. Richards 223 (1995) 180

Compatibility and Corrosion *(includes Stress Corrosion Cracking)*

Effect of hoop stress on corrosion of Zircaloy-4 cladding tube, Y.S. Kim, J.S. Noh, S.C. Kwon and I.H. Kuk 223 (1995) 163

Electrically conducting paths in thick (> 10 μm) zirconia films, B. Cox, Y.-M. Wong and T. Hoang 223 (1995) 202

Chemical reactions of Zircaloy-4 and zirconium with (i) dicaesium telluride, Cs_2Te, (ii) caesium tellurite, Cs_2TeO_3, and (iii) tellurium, under different oxygen potentials, R.J. Pulham, M.W. Richards and D.R. Kennard 223 (1995) 277

Cathodic polarisation of corroding Zircaloy-4, B. Cox, Y.-M. Wong and C.W.F. Quon 223 (1995) 321

Microstructures of corrosion films on UO_2 fuel oxidized in air–steam mixtures at 225°C, P. Taylor, D.D. Wood and D.G. Owen 223 (1995) 316

Copper, Copper Alloys and Compounds

Modelling of cascade-induced dissolution of coherent chromium precipitates in copper, A.A. Turkin, Yu.A. Turkin, A.S. Bakai, C. Abromeit, V. Naundorf and N. Wanderka 223 (1995) 143

A comparison of displacement cascades in copper and iron by molecular dynamics and its application to microstructural evolution, W.J. Phythian, R.E. Stoller, A.J.E. Foreman, A.F. Calder and D.J. Bacon 223 (1995) 245

Creep and Stress Relaxation

Local stress relaxation in thermal spikes as a possible cause for creep and macroscopic stress relaxation of amorphous solids under irradiation, H. Trinkaus 223 (1995) 196

Defects and Defect Structures *(excludes by Irradiation)*

Study on order–disorder transition of Zr–O alloys (O/Zr = 0–0.31) by heat capacity measurement, T. Tsuji and M. Amaya 223 (1995) 33

Characterization of single crystal of Type 304 stainless steels using RBS- and PIXE-channeling, T. Nakae, K. Kawatsura, R. Takahashi, S. Arai, T. Mitamura, M. Terasawa, H. Uchida, K. Koterazawa, H. Horino, Y. Mokuno and K. Fujii 223 (1995) 210

Diffusion

Volatile fission product bubble behaviour in uranium dioxide, V.F. Chkuaseli and Hj. Matzke 223 (1995) 61

α-Zr self-diffusion anisotropy, G.M. Hood, H. Zou, D. Gupta and R.J. Schultz 223 (1995) 122

Chemical diffusion in Zr–Nb system, R.V. Patil, G.B. Kale and S.P. Garg 223 (1995) 169

The solid solubility of Ni and Co in α-Zr: a secondary ion mass spectrometry study, H. Zou, G.M. Hood, H. Nakajima, J.A. Roy and R.J. Schultz 223 (1995) 186

The segregation of Fe to a zirconium surface, C.-S. Zhang, B. Li and P.R. Norton 223 (1995) 238

Divertor Materials

Experimental study on plasma heat flow to plasma-facing materials, S. Masuzaki, N. Ohno and S. Takamura 223 (1995) 286

Electrical Properties

On the phase relationships and electrical properties in the $CaCl_2$–CaH_2 system, R. Sridharan, K.H. Mahendran, T. Gnanasekaran, G. Periaswami, U.V. Varadaraju and C.K. Mathews 223 (1995) 72

The electrical conductivity of sapphire irradiated at 550–700°C with an applied electric field of 1 kV/cm, G.P. Pells and B.C. Sowden 223 (1995) 174

Electrically conducting paths in thick (> 10 μm) zirconia films, B. Cox, Y.-M. Wong and T. Hoang 223 (1995) 202

Experimental Techniques

Characterization of single crystal of Type 304 stainless steels using RBS- and PIXE-channeling, T. Nakae, K. Kawatsura, R. Takahashi, S. Arai, T. Mitamura, M. Terasawa, H. Uchida, K. Koterazawa, H. Horino, Y. Mokuno and K. Fujii 223 (1995) 210

Fission Products

Oxygen potential measurements in high burnup LWR UO_2 fuel, Hj. Matzke 223 (1995) 1

Volatile fission product bubble behaviour in uranium dioxide, V.F. Chkuaseli and Hj. Matzke 223 (1995) 61

Reaction of tellurium with Zircaloy-4, R. de Boer and E.H.P. Cordfunke 223 (1995) 103
Validation of the ORIGEN-S code for predicting radionuclide inventories in used CANDU fuel, J.C. Tait, I. Gauld and A.H. Kerr 223 (1995) 109
Desorption of ^{137}Cs from a graphitic surface in the presence of a weak electric field, E. Hoinkis 223 (1995) 189
Chemical reactions of Zircaloy-4 and zirconium with (i) dicaesium telluride, Cs_2Te, (ii) caesium tellurite, Cs_2TeO_3, and (iii) tellurium, under different oxygen potentials, R.J. Pulham, M.W. Richards and D.R. Kennard 223 (1995) 277

Fuels and Fuel Elements
Fuel oxidation and irradiation behaviors of defective BWR fuel rods, K. Une, M. Imamura, M. Amaya and Y. Korei 223 (1995) 40
Validation of the ORIGEN-S code for predicting radionuclide inventories in used CANDU fuel, J.C. Tait, I. Gauld and A.H. Kerr 223 (1995) 109
Effect of recrystallization in high-burnup UO_2 on gas release during RIA-type transients, J. Rest and G.L. Hofman 223 (1995) 192
Nucleation of the $\alpha \rightarrow \beta$ and $\beta \rightarrow \alpha$ transformations in unalloyed plutonium, J.R. Cost and K.A. Johnson 223 (1995) 267
Microstructures of corrosion films on UO_2 fuel oxidized in air–steam mixtures at 225°C, P. Taylor, D.D. Wood and D.G. Owen 223 (1995) 316

Gases *(excludes Hydrogen, Helium and Tritium)* **in Materials**
Volatile fission product bubble behaviour in uranium dioxide, V.F. Chkuaseli and Hj. Matzke 223 (1995) 61
Effect of recrystallization in high-burnup UO_2 on gas release during RIA-type transients, J. Rest and G.L. Hofman 223 (1995) 192

Heat Treatment
Characterization of single crystal of Type 304 stainless steels using RBS- and PIXE-channeling, T. Nakae, K. Kawatsura, R. Takahashi, S. Arai, T. Mitamura, M. Terasawa, H. Uchida, K. Koterazawa, H. Horino, Y. Mokuno and K. Fujii 223 (1995) 210

Hydrogen and Hydrides *(includes Deuterium and Deuterides)*
Effect of sweep gas chemistry on vaporization of Li_4SiO_4, M. Yamawaki, A. Suzuki, M. Yasumoto and K. Yamaguchi 223 (1995) 80
The surface rate constants of deuterium in the martensitic steel DIN 1.4914 (MANET), E. Serra and A. Perujo 223 (1995) 157
Effect of hoop stress on corrosion of Zircaloy-4 cladding tube, Y.S. Kim, J.S. Noh, S.C. Kwon and I.H. Kuk 223 (1995) 163
Fraction of hydrocarbon emission in thermal re-emission of hydrogen implanted into graphite, Y. Muto and K. Morita 223 (1995) 262
Reversible disproportionation of ZrCo under high temperature and hydrogen pressure, S. Konishi, T. Nagasaki and K. Okuno 223 (1995) 294
Equilibrium hydrogen pressure on the solid solutions of ZrCo–HfCo intermetallic compounds, S. Konishi, T. Nagasaki, T. Hayashi and K. Okuno 223 (1995) 300
Cathodic polarisation of corroding Zircaloy-4, B. Cox, Y.-M. Wong and C.W.F. Quon 223 (1995) 321

Ion Irradiation
Local stress relaxation in thermal spikes as a possible cause for creep and macroscopic stress relaxation of amorphous solids under irradiation, H. Trinkaus 223 (1995) 196
A comparison of displacement cascades in copper and iron by molecular dynamics and its application to microstructural evolution, W.J. Phythian, R.E. Stoller, A.J.E. Foreman, A.F. Calder and D.J. Bacon 223 (1995) 245
Reemission of deuterium atoms from Mo, Ta and W during D^+-irradiation, J.W. Davis and A.A. Haasz 223 (1995) 312

Irradiation *(not listed elsewhere, includes Irradiation History or Schedule)*
The electrical conductivity of sapphire irradiated at 550–700°C with an applied electric field of 1 kV/cm, G.P. Pells and B.C. Sowden 223 (1995) 174

Kinetics
Chemical reactions of caesium, tellurium and oxygen with fast breeder reactor cladding alloys. Part VII – The kinetics of the corrosion of 12R72HV steel by Cs_2Te at a constant O_2 potential; comparison with rates for PE16 alloy, R.J. Pulham and M.W. Richards 223 (1995) 180

Laser
Thermal conductivity of hyperstoichiometric SIMFUEL, P.G. Lucuta, Hj. Matzke and R.A. Verrall 223 (1995) 51

Liquid Metals
Lithium sol–gel ceramics for tritium breeding applications, O. Renoult, J.-P. Boilot, J.-P. Korb and M. Boncoeur 223 (1995) 126

Mathematical and Computational Methods
The contribution of thermal radiation to the thermal conductivity of porous UO_2, K. Bakker, H. Kwast and E.H.P. Cordfunke 223 (1995) 135

A comparison of displacement cascades in copper and iron by molecular dynamics and its application to microstructural evolution, W.J. Phythian, R.E. Stoller, A.J.E. Foreman, A.F. Calder and D.J. Bacon 223 (1995) 245

Metals, Alloys and Compounds *(not listed elsewhere)*
A mass spectrometric study of the thermal decomposition of small quantities of $AgNO_3$, $CsNO_3$ and Cs_2CO_3, E. Hoinkis and H. Matiske 223 (1995) 218
Equilibrium hydrogen pressure on the solid solutions of ZrCo–HfCo intermetallic compounds, S. Konishi, T. Nagasaki, T. Hayashi and K. Okuno 223 (1995) 300

Microstructure and Texture *(excludes by Irradiation)*
Microstructures of corrosion films on UO_2 fuel oxidized in air–steam mixtures at 225°C, P. Taylor, D.D. Wood and D.G. Owen 223 (1995) 316

Molybdenum, Molybdenum Alloys and Compounds
Thermodynamic analysis of Zr–U and Zr–Np alloys in view of f–d interaction, T. Ogawa, J.K. Gibson, R.G. Haire, M.M. Gensini and M. Akabori 223 (1995) 67
Microstructure and mechanical behaviour of TZM and Mo–5% Re alloys irradiated with fission neutrons, B.N. Singh, J.H. Evans, A. Horsewell, P. Toft and D.J. Edwards 223 (1995) 95

Neutron Irradiation
Microstructure and mechanical behaviour of TZM and Mo–5% Re alloys irradiated with fission neutrons, B.N. Singh, J.H. Evans, A. Horsewell, P. Toft and D.J. Edwards 223 (1995) 95

Niobium, Niobium Alloys and Compounds
Chemical diffusion in Zr–Nb system, R.V. Patil, G.B. Kale and S.P. Garg 223 (1995) 169

Permeation
The surface rate constants of deuterium in the martensitic steel DIN 1.4914 (MANET), E. Serra and A. Perujo 223 (1995) 157

Phase Equilibria *(includes Constitution, Phase Stability, Phase Instability)*
Thermodynamic analysis of Zr–U and Zr–Np alloys in view of f–d interaction, T. Ogawa, J.K. Gibson, R.G. Haire, M.M. Gensini and M. Akabori 223 (1995) 67
Reversible disproportionation of ZrCo under high temperature and hydrogen pressure, S. Konishi, T. Nagasaki and K. Okuno 223 (1995) 294
Equilibrium hydrogen pressure on the solid solutions of ZrCo–HfCo intermetallic compounds, S. Konishi, T. Nagasaki, T. Hayashi and K. Okuno 223 (1995) 300

Phase Transformation *(includes Evaporation, Sublimation)*
Study on order–disorder transition of Zr–O alloys (O/Zr = 0–0.31) by heat capacity measurement, T. Tsuji and M. Amaya 223 (1995) 33
On the phase relationships and electrical properties in the $CaCl_2$–CaH_2 system, R. Sridharan, K.H. Mahendran, T. Gnanasekaran, G. Periaswami, U.V. Varadaraju and C.K. Mathews 223 (1995) 72
Effect of sweep gas chemistry on vaporization of Li_4SiO_4, M. Yamawaki, A. Suzuki, M. Yasumoto and K. Yamaguchi 223 (1995) 80
A mechanism for the UO_2 to α-U_3O_8 phase transformation, G.C. Allen and N.R. Holmes 223 (1995) 231
Nucleation of the $\alpha \rightarrow \beta$ and $\beta \rightarrow \alpha$ transformations in unalloyed plutonium, J.R. Cost and K.A. Johnson 223 (1995) 267

Plasma–Materials Interaction
Fraction of hydrocarbon emission in thermal re-emission of hydrogen implanted into graphite, Y. Muto and K. Morita 223 (1995) 262
Experimental study on plasma heat flow to plasma-facing materials, S. Masuzaki, N. Ohno and S. Takamura 223 (1995) 286
Reemission of deuterium atoms from Mo, Ta and W during D^+-irradiation, J.W. Davis and A.A. Haasz 223 (1995) 312

Plutonium, Plutonium Alloys and Compounds
Chemical potential of carbon in the system U–Pu–C–O–N: Measurements and calculation, S. Anthonysamy, K. Ananthasivan, I. Kaliappan, V. Chandramouli, P.R. Vasudeva Rao, C.K. Mathews and K.T. Jacob 223 (1995) 20
Thermodynamic analysis of Zr–U and Zr–Np alloys in view of f–d interaction, T. Ogawa, J.K. Gibson, R.G. Haire, M.M. Gensini and M. Akabori 223 (1995) 67
Validation of the ORIGEN-S code for predicting radionuclide inventories in used CANDU fuel, J.C. Tait, I. Gauld and A.H. Kerr 223 (1995) 109
Nucleation of the $\alpha \rightarrow \beta$ and $\beta \rightarrow \alpha$ transformations in unalloyed plutonium, J.R. Cost and K.A. Johnson 223 (1995) 267

Pores *(includes Porosity, Fabrication Pores)*
Effect of recrystallization in high-burnup UO_2 on gas release during RIA-type transients, J. Rest and G.L. Hofman 223 (1995) 192

Powder Processes and Products
Immobilization of simulated high-level waste in sintered glasses, M.A. Audero, A.M. Bevilacqua, N.B.M. de Bernasconi, D.O. Russo and M.E. Sterba 223 (1995) 151

Precipitates and Precipitation
Modelling of cascade-induced dissolution of coherent chromium precipitates in copper, A.A. Turkin, Yu.A. Turkin, A.S. Bakai, C. Abromeit, V. Naundorf and N. Wanderka 223 (1995) 143
The segregation of Fe to a zirconium surface, C.-S. Zhang, B. Li and P.R. Norton 223 (1995) 238

Radiation Effects: Atomic Defects
Modelling of cascade-induced dissolution of coherent chromium precipitates in copper, A.A. Turkin, Yu.A. Turkin, A.S. Bakai, C. Abromeit, V. Naundorf and N. Wanderka 223 (1995) 143

Radiation Effects: Extended Defects, Microstructures
Microstructure and mechanical behaviour of TZM and Mo–5% Re alloys irradiated with fission neutrons, B.N. Singh, J.H. Evans, A. Horsewell, P. Toft and D.J. Edwards 223 (1995) 95
A comparison of displacement cascades in copper and iron by molecular dynamics and its application to microstructural evolution, W.J. Phythian, R.E. Stoller, A.J.E. Foreman, A.F. Calder and D.J. Bacon 223 (1995) 245

Radiation Effects: Mechanical Properties
Microstructure and mechanical behaviour of TZM and Mo–5% Re alloys irradiated with fission neutrons, B.N. Singh, J.H. Evans, A. Horsewell, P. Toft and D.J. Edwards 223 (1995) 95

Radiolysis
An investigation of acoustic emission from an irradiated nuclear graphite, G.B. Neighbour and B. McEnaney 223 (1995) 305

Reprocessing
The Purex thermodynamics of plutonium(IV) and uranium(VI) macroconcentrations coextraction into tri-n butylphosphate: new data and new models, Ed.V. Renard, A.A. Chizhov and V.S. Vlasov 223 (1995) 90

Safety of Nuclear Reactors
Effect of recrystallization in high-burnup UO_2 on gas release during RIA-type transients, J. Rest and G.L. Hofman 223 (1995) 192

Segregation
The segregation of Fe to a zirconium surface, C.-S. Zhang, B. Li and P.R. Norton 223 (1995) 238

Steels, Austenitic
Characterization of single crystal of Type 304 stainless steels using RBS- and PIXE-channeling, T. Nakae, K. Kawatsura, R. Takahashi, S. Arai, T. Mitamura, M. Terasawa, H. Uchida, K. Koterazawa, H. Horino, Y. Mokuno and K. Fujii 223 (1995) 210

Steels, Ferritic
The surface rate constants of deuterium in the martensitic steel DIN 1.4914 (MANET), E. Serra and A. Perujo 223 (1995) 157

Theory and Modelling
A refined analysis of oxygen potential of $M_yU_{1-y}O_{2+x}$ ($M = M^{3+}$ and M^{2+}) by lattice statistics based on the grand partition function and the Flory methods, T. Fujino, N. Sato and K. Yamada 223 (1995) 6
Volatile fission product bubble behaviour in uranium dioxide, V.F. Chkuaseli and Hj. Matzke 223 (1995) 61
Modelling of cascade-induced dissolution of coherent chromium precipitates in copper, A.A. Turkin, Yu.A. Turkin, A.S. Bakai, C. Abromeit, V. Naundorf and N. Wanderka 223 (1995) 143
A comparison of displacement cascades in copper and iron by molecular dynamics and its application to microstructural evolution, W.J. Phythian, R.E. Stoller, A.J.E. Foreman, A.F. Calder and D.J. Bacon 223 (1995) 245

Thermodynamic Properties
Oxygen potential measurements in high burnup LWR UO_2 fuel, Hj. Matzke 223 (1995) 1
A refined analysis of oxygen potential of $M_yU_{1-y}O_{2+x}$ ($M = M^{3+}$ and M^{2+}) by lattice statistics based on the grand partition function and the Flory methods, T. Fujino, N. Sato and K. Yamada 223 (1995) 6
Chemical potential of carbon in the system U–Pu–C–O–N: Measurements and calculation, S. Anthonysamy, K. Ananthasivan, I. Kaliappan, V. Chandramouli, P.R. Vasudeva Rao, C.K. Mathews and K.T. Jacob 223 (1995) 20
Heat effects accompanying phase changes in the Zr–U–O system, D.R. Olander and W. Wang 223 (1995) 28
Study on order–disorder transition of Zr–O alloys ($O/Zr = 0$–0.31) by heat capacity measurement, T. Tsuji and M. Amaya 223 (1995) 33
Fuel oxidation and irradiation behaviors of defective BWR fuel rods, K. Une, M. Imamura, M. Amaya and Y. Korei 223 (1995) 40
Thermal conductivity of hyperstoichiometric SIMFUEL, P.G. Lucuta, Hj. Matzke and R.A. Verrall 223 (1995) 51

Thermodynamic analysis of Zr–U and Zr–Np alloys in view of f–d interaction, T. Ogawa, J.K. Gibson, R.G. Haire, M.M. Gensini and M. Akabori 223 (1995) 67
Enthalpies of formation of UNi_5, UNi_2 and UFe_2 by solution calorimetry, M.P. Antony, R. Babu, C.K. Mathews and U.V. Varada Raju 223 (1995) 213
A mass spectrometric study of the thermal decomposition of small quantities of $AgNO_3$, $CsNO_3$ and Cs_2CO_3, E. Hoinkis and H. Matiske 223 (1995) 218

Thermomechanical Treatment
The solid solubility of Ni and Co in α-Zr: a secondary ion mass spectrometry study, H. Zou, G.M. Hood, H. Nakajima, J.A. Roy and R.J. Schultz 223 (1995) 186

Thermophysical Properties
Thermal conductivity of hyperstoichiometric SIMFUEL, P.G. Lucuta, Hj. Matzke and R.A. Verrall 223 (1995) 51
The contribution of thermal radiation to the thermal conductivity of porous UO_2, K. Bakker, H. Kwast and E.H.P. Cordfunke 223 (1995) 135

Tritium and Tritides
Lithium sol–gel ceramics for tritium breeding applications, O. Renoult, J.-P. Boilot, J.-P. Korb and M. Boncoeur 223 (1995) 126

Tungsten, Tungsten Alloys and Compounds
Experimental study on plasma heat flow to plasma-facing materials, S. Masuzaki, N. Ohno and S. Takamura 223 (1995) 286

Uranium, Uranium Alloys and Compounds
Oxygen potential measurements in high burnup LWR UO_2 fuel, Hj. Matzke 223 (1995) 1
A refined analysis of oxygen potential of $M_yU_{1-y}O_{2+x}$ ($M = M^{3+}$ and M^{2+}) by lattice statistics based on the grand partition function and the Flory methods, T. Fujino, N. Sato and K. Yamada 223 (1995) 6
Chemical potential of carbon in the system U–Pu–C–O–N: Measurements and calculation, S. Anthonysamy, K. Ananthasivan, I. Kaliappan, V. Chandramouli, P.R. Vasudeva Rao, C.K. Mathews and K.T. Jacob 223 (1995) 20
Heat effects accompanying phase changes in the Zr–U–O system, D.R. Olander and W. Wang 223 (1995) 28
Fuel oxidation and irradiation behaviors of defective BWR fuel rods, K. Une, M. Imamura, M. Amaya and Y. Korei 223 (1995) 40
Thermal conductivity of hyperstoichiometric SIMFUEL, P.G. Lucuta, Hj. Matzke and R.A. Verrall 223 (1995) 51
Volatile fission product bubble behaviour in uranium dioxide, V.F. Chkuaseli and Hj. Matzke 223 (1995) 61
Thermodynamic analysis of Zr–U and Zr–Np alloys in view of f–d interaction, T. Ogawa, J.K. Gibson, R.G. Haire, M.M. Gensini and M. Akabori 223 (1995) 67
Influence of granite on the leaching behaviour of different nuclear waste forms, J.-P. Glatz, E.H. Toscano, G. Pagliosa and A. Nicholl 223 (1995) 84
The contribution of thermal radiation to the thermal conductivity of porous UO_2, K. Bakker, H. Kwast and E.H.P. Cordfunke 223 (1995) 135
Enthalpies of formation of UNi_5, UNi_2 and UFe_2 by solution calorimetry, M.P. Antony, R. Babu, C.K. Mathews and U.V. Varada Raju 223 (1995) 213
A mechanism for the UO_2 to α-U_3O_8 phase transformation, G.C. Allen and N.R. Holmes 223 (1995) 231
Microstructures of corrosion films on UO_2 fuel oxidized in air–steam mixtures at 225°C, P. Taylor, D.D. Wood and D.G. Owen 223 (1995) 316

Vitrification
Influence of granite on the leaching behaviour of different nuclear waste forms, J.-P. Glatz, E.H. Toscano, G. Pagliosa and A. Nicholl 223 (1995) 84
Immobilization of simulated high-level waste in sintered glasses, M.A. Audero, A.M. Bevilacqua, N.B.M. de Bernasconi, D.O. Russo and M.E. Sterba 223 (1995) 151

Wastes
Influence of granite on the leaching behaviour of different nuclear waste forms, J.-P. Glatz, E.H. Toscano, G. Pagliosa and A. Nicholl 223 (1995) 84
Validation of the ORIGEN-S code for predicting radionuclide inventories in used CANDU fuel, J.C. Tait, I. Gauld and A.H. Kerr 223 (1995) 109
Immobilization of simulated high-level waste in sintered glasses, M.A. Audero, A.M. Bevilacqua, N.B.M. de Bernasconi, D.O. Russo and M.E. Sterba 223 (1995) 151

Zirconium, Zirconium Alloys and Compounds
Heat effects accompanying phase changes in the Zr–U–O system, D.R. Olander and W. Wang 223 (1995) 28
Study on order–disorder transition of Zr–O alloys ($O/Zr = 0$–0.31) by heat capacity measurement, T. Tsuji and M. Amaya 223 (1995) 33
Fuel oxidation and irradiation behaviors of defective BWR fuel rods, K. Une, M. Imamura, M. Amaya and Y. Korei 223 (1995) 40

Reaction of tellurium with Zircaloy-4, R. de Boer and E.H.P. Cordfunke 223 (1995) 103
α-Zr self-diffusion anisotropy, G.M. Hood, H. Zou, D. Gupta and R.J. Schultz 223 (1995) 122
Effect of hoop stress on corrosion of Zircaloy-4 cladding tube, Y.S. Kim, J.S. Noh, S.C. Kwon and I.H. Kuk 223 (1995) 163
Chemical diffusion in Zr–Nb system, R.V. Patil, G.B. Kale and S.P. Garg 223 (1995) 169
The solid solubility of Ni and Co in α-Zr: a secondary ion mass spectrometry study, H. Zou, G.M. Hood, H. Nakajima, J.A. Roy and R.J. Schultz 223 (1995) 186
Electrically conducting paths in thick (> 10 μm) zirconia films, B. Cox, Y.-M. Wong and T. Hoang 223 (1995) 202
The segregation of Fe to a zirconium surface, C.-S. Zhang, B. Li and P.R. Norton 223 (1995) 238
Chemical reactions of Zircaloy-4 and zirconium with (i) dicaesium telluride, Cs_2Te, (ii) caesium tellurite, Cs_2TeO_3, and (iii) tellurium, under different oxygen potentials, R.J. Pulham, M.W. Richards and D.R. Kennard 223 (1995) 277
Reversible disproportionation of ZrCo under high temperature and hydrogen pressure, S. Konishi, T. Nagasaki and K. Okuno 223 (1995) 294
Equilibrium hydrogen pressure on the solid solutions of ZrCo–HfCo intermetallic compounds, S. Konishi, T. Nagasaki, T. Hayashi and K. Okuno 223 (1995) 300
Cathodic polarisation of corroding Zircaloy-4, B. Cox, Y.-M. Wong and C.W.F. Quon 223 (1995) 321